

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-14 are pending in the present application. Claims 1-10 are amended and new Claims 11-14 are added by the present amendment.

New Claims 11-14 include features similar to features in the originally filed claims. Thus, it is believed that no new matter is added.

In the outstanding Office Action, the specification was objected to; Claims 4-10 were objected to; and Claims 1-3 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,256,356 to Suzuki in view of U.S. Patent No. 5,515,369 to Flammer, III et al. (herein “Flammer”).

Initially, Applicant and Applicant’s representatives gratefully acknowledge the courtesy of a personal interview with Examiner Daniel and Supervisory Patent Examiner Banks-Harold on October 19, 2004. During the interview, objections and rejections in the outstanding Office Action, unofficial claim amendments, and differences between the unofficial claim amendments and references cited in the outstanding Office Action were discussed. Comments discussed during the interview are reiterated below.

In response to the objection to the specification, a substitute specification is provided adopting suggestions in the outstanding Office Action. Accordingly, it is respectfully requested that objection be withdrawn.

Further, regarding the objection to the claims, Claims 3-10 are amended to be in single dependent form, in light of comments in the outstanding Office Action. Thus, it is respectfully requested the objection to Claims 4-10 also be withdrawn.

Applicant respectfully traverses the rejection of Claims 1-3 under 35 U.S.C. § 103(a) as unpatentable over Suzuki in view of Flammer.

Claim 1 is directed to a method for dynamic allocation of transmission resources to a plurality of communications between a base station and a plurality of mobile terminals. Each resource includes a plurality of possible values. In addition, an allocation controller associated with the base station, referred to as the fast allocation controller, is able to allocate to the communications only certain combinations of possible values. The certain combinations of possible values are referred to as available resources. The fast allocation controller generates a pseudo-random sequence and performs the allocation by selecting at least one available resource for each communication according to a value of the pseudo-random sequence.

In a non-limiting example, FIG. 1 shows a communication system with a plurality of adjacent base stations BS that communicate with mobile terminals (e.g., one mobile telephone, i.e., mobile terminal, is shown). A fast allocation controller is associated with each of the base stations BS. In this example, the fast allocation controller associated with base station BS generates a pseudo-random sequence according to equation (1) at page 6 and transmits parameters to generate that pseudo-random sequence to each mobile terminal with which the base station BS communicates so that each mobile terminal also generates the same pseudo-random sequence. Then, both the fast allocation controller and each mobile terminal allocate transmission resources for each communication between the base station BS and each mobile terminal according to a value of the same pseudo-random sequence. In other words, communications transmitted from the base station BS to mobile terminals are transmitted according to resources allocated by a pseudo-random sequence.

This arrangement advantageously allows a dynamic allocation of transmission resources among mobile terminals with a minimal amount of signaling.¹

¹ Specification at page 2, lines 19-20.

Applicant respectfully traverses the assertion in the outstanding Office Action that Flammer discloses generating a pseudo-random sequence and allocating at least one available resource to a communication according to a value of the pseudo-random sequence. Conversely, Applicant respectfully notes that Flammer only describes that the remaining channels in the list 40 are randomized by using a pseudo-random number generator to generate list 50, which is the channel hopping band plan. That is, the pseudo-random sequence is merely used to generate a list of channels in pseudo-random order. Hence, it is respectfully submitted that Flammer does not teach or suggest an allocation controller that generates a pseudo-random sequence and performs the allocation by selecting at least one available resource for each communication according to a value of the pseudo-random sequence," as recited in independent Claim 1.

Further, Applicant respectfully submits that Suzuki does not supply the features of the independent claim that are deficient in Flammer. Accordingly, Applicant submits independent Claim 1, and claims depending therefrom, are allowable.

Claim 11 is directed to a communication system including, *inter alia*, a fast allocation controller associated with a base station and configured to generate a pseudo-random sequence, transmit a seed for generating the pseudo-random sequence to the plurality of mobile terminals, and allocate the available resources to each communication in the plurality of communications from the base station to the plurality of mobile terminals according to a value of the pseudo-random sequence. In addition, the system includes a slow allocation controller that determines available resources for each base and transmits the available resources to the fast allocation controller. The mobile terminals generate the pseudo-random sequence from the seed, and the base station transmits a first communication to a first terminal in the plurality of mobile terminals and a second communication to a second terminal in the plurality of mobile terminals according to the allocated resources.

As discussed during the interview, the combined disclosures of Suzuki and Flammer do not teach or suggest transmitting first and second communications from a base station to first and second mobile terminals according to resources allocated according to a value of a same pseudo-random sequence. As noted in the outstanding Office Action, Suzuki does not disclose generating a pseudo-random sequence and allocating transmission resources according to a value of the pseudo-random sequence.² Further, Flammer does not disclose transmitting communications to more than one node according to resources allocated by a value of a same pseudo-random sequence. Thus, Applicant respectfully submits that the combined disclosure of Suzuki and Flammer does not teach the features of new Claim 11.

Accordingly, Applicant respectfully submits that new Claim 11 is allowable.

Further, new independent Claim 12 is directed to a method of dynamically allocating transmission resources to a communication between a base station and a mobile terminal that includes, *inter alia*, generating a pseudo-random sequence from a seed by the mobile terminal at a predetermined frequency, and allocating the available resources to the communication according to a value in the pseudo-random sequence. Applicant respectfully submits that the combination of Suzuki and Flammer does not teach the features of new Claim 12.

Accordingly, Applicant submits that new independent Claim 12 is allowable.

In addition, new independent Claim 13 is directed to a method for dynamic allocation of resources to a communication between a base station and a mobile terminal that includes, *inter alia*, generating a matrix including at least two dimensions to store a plurality of possible values and allocating a combination of possible values based on an index of the matrix and a value in a pseudo-random sequence. Applicants respectfully submit the combination of Suzuki and Flammer also does not teach the features of new Claim 13.

Accordingly, Applicants respectfully submit that new Claim 13 is allowable.

² Office Action at page 4, lines 18-21.

In addition, new independent Claim 14 is directed to a method for dynamic allocation of resources to a communication between a base station and a mobile terminal that includes, *inter alia*, selecting a subset of combinations of values from a determined plurality of available combinations, where a number of combinations of values in the subset of combinations of values is smaller than a number of combinations of values in a plurality of available combinations of values, and allocating the subset of combinations of values to the communication between the base station and the mobile terminal. Applicants respectfully submit the combination of Suzuki and Flammer also does not teach the features of new Claim 14.

Accordingly, Applicant respectfully submits that new Claim 14 is allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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